

Schemes of arrangement and corporate exit: A South African perspective



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Background: Corporate delistings undermine investor confidence and market stability. In South Africa, schemes of arrangement (SoAs) have emerged as the dominant mechanism for delisting from the Johannesburg Stock Exchange (JSE), raising questions about strategic, governance and economic drivers.

Aim: This study investigates determinants of corporate delisting in South Africa, focusing on firms that exited the JSE through SoAs between 2010 and 2023.

Setting: The research examines 604 companies: 302 delisted firms and 302 matched listed firms by industry and size.

Method: A mixed-methods approach incorporated structured literature review, principal component analysis, qualitative content analysis and multivariate panel probit regression. Data were sourced from Bloomberg and audited financial statements, with the observation period beginning in 2010, aligning with mandatory integrated reporting standards.

Results: Key predictors of delisting include debt structure, cost of capital efficiency, market valuation, board dynamics, ownership diffusion, institutional investor presence, chief executive officer (CEO) qualifications, interest rates and unemployment. Strategic and governance factors were more influential than financial distress indicators.

Conclusion: SoA delisting is primarily driven by strategic repositioning and governance considerations rather than financial failure. The study offers practical insights for corporate leaders, regulators, and investors in developing-economy contexts.

Contribution: This study provides the first comprehensive empirical analysis of delisting determinants in South Africa, addresses an emerging market research gap, identifies SoAs as the dominant JSE delisting mechanism revealing strategic rather than distress-driven motivations, and demonstrates through integrated analysis of financial, governance and macroeconomic variables that non-financial factors – particularly board stability, ownership structure and CEO qualifications – are stronger predictors of SoA delisting than traditional financial distress indicators.

Keywords: Johannesburg Stock Exchange; delisting; financial variables; non-financial variables; macroeconomic variables; schemes of arrangement; developing economy; South Africa.

Introduction

Background

The integrity of financial markets relies on the transparency and reliability of publicly listed companies (Bharath & Dittmar 2010). Firms with strong financial performance and operational efficiency foster investor trust and market participation (Boers et al. 2017). Transparent disclosures and regulatory compliance reduce uncertainty and risk (Crocì & Giudice 2014). However, rising delisting rates have raised concerns among investors, regulators and analysts (Sallehuddin, Mei & Saad 2019).

Delisting – the removal of a company's shares from public trading – can erode investor confidence, limit access to funding and damage reputations (Kang 2017). At scale, it may destabilise markets, reduce investment flows and hinder economic productivity (Martinez & Serve 2017). Understanding delisting drivers is thus essential for safeguarding market resilience. In this regard, global studies highlight financial factors such as liquidity, valuation and profitability as key influences (Intrigano, Micheli & Calce 2020; Putri 2021). Common causes include poor financial performance, high listing costs, regulatory burdens and undervaluation (Bessler et al. 2012).

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Regulatory breaches, non-compliance, fraud and corporate restructuring – particularly through schemes of arrangement (SoAs) – also contribute (Makrominas & Yiannoulis 2021).

Yet, research in developing economies remains limited, notably within South Africa (Lansdell, Botha & Marx 2025). These markets experience heightened volatility because of political instability, commodity price fluctuations and exchange rate variability (Kola Benson, Habanabakize & Fortune 2022), which complicates financial consistency and compliance. Such conditions may also drive restructuring and delisting through SoAs (Intrigano et al. 2020).

Academic literature often overlooks non-financial and macroeconomic variables. Governance, regulatory adherence and reputation are critical non-financial factors (Thomsen & Vinten 2014). Macroeconomic indicators – such as inflation, interest rates, credit availability, unemployment and commodity prices – shape the operating environment and influence strategic decisions (Djerbi & Anis 2015). A holistic approach integrating these dimensions is essential for a nuanced understanding of delisting trends (Lansdell et al. 2025).

The Johannesburg Stock Exchange (JSE), a key financial institution in Africa, plays a central role in South Africa's economic development (Ferreira et al. 2019). It reflects broader economic conditions and investor sentiment (Nikani & Holland 2022). While global exchanges experience delisting pressures, the JSE is contending with unique challenges tied to economic volatility and regulatory shifts (Martinez & Serve 2017). Frequent regulatory changes may burden smaller firms, prompting them to delist to reduce costs and administrative strain (Magni et al. 2021).

Delisting represents a serious concern for the JSE and South African capital markets (Nikani & Holland 2022). Between 2010 and 2023, the JSE experienced 781 delistings across all instrument types, with 312 ordinary equity delistings – a substantial erosion of the listed company base. This trend mirrors broader concerns about market depth, liquidity and the attractiveness of public markets in emerging economies. The prevalence of SoAs as a delisting mechanism (56.1% of all delistings in this study) suggests that strategic rather than distress-driven exits are occurring, raising questions about whether listing requirements, compliance costs or alternative capital sources are prompting viable companies to leave public markets. For investors, regulators and policymakers, understanding these dynamics is critical to maintaining market vitality, protecting investor interests and ensuring that capital markets continue to serve as effective platforms for economic growth and corporate financing.

Given the JSE's importance and the implications of delisting, this study examines how financial, non-financial and macroeconomic factors jointly influence the likelihood of delisting, with a focus on SoAs as a key pathway in South Africa. Using a multivariate panel probit regression model, the study identifies significant predictors that may serve as

early warning indicators. This research addresses a significant gap in the literature by providing the first comprehensive analysis of delisting determinants specific to the South African context, where existing studies have been limited. While prior research has examined delisting in developed markets, the unique characteristics of emerging economies – including regulatory volatility, economic instability and distinct governance challenges – necessitate context-specific investigation. Moreover, this study distinguishes itself by focusing specifically on SoAs as a strategic delisting mechanism, rather than treating all delistings as equivalent events driven primarily by financial distress. By integrating financial, governance and macroeconomic variables in a unified framework, this research reveals that strategic and governance considerations – not just financial failure – are primary drivers of delisting through SoAs, offering new insights for corporate leaders, regulators and policymakers in developing economies.

The article proceeds as follows: The 'Review of related literature' section reviews the literature on financial, non-financial and macroeconomic delisting factors, with an emphasis on the SoA. The 'Methods' section outlines the methodology and sample. The 'Results, analysis and discussion' section presents findings from principal component analysis (PCA), qualitative content analysis and probit regression. The 'Conclusion' section concludes with recommendations and future research directions.

Review of related literature

This study focuses on SoAs as a primary mechanism for delisting on the JSE. An SoA is a significant pathway for companies exiting the exchange, with implications for market stability and investor confidence (Nikani & Holland 2022). Hence, understanding this mechanism is essential for analysing the financial, non-financial and macroeconomic variables that may predict delisting.

An SoA is a corporate action involving an agreement between a company and its shareholders, sometimes with a third-party offeror (Malik, Xinping & Shabbir 2014). Upon meeting the requirements of the *Companies Act No. 71 of 2008*, the company may be removed from listing (Nikani & Holland 2022). In South Africa, delisting through SoAs has become a prevalent method, contributing to a notable decline in JSE listings over the past two decades (Mfuphi 2023). Typically used for capital restructuring or addressing financial distress, an SoA proposes a reorganisation plan requiring approval from shareholders or creditors. Once sanctioned, the plan becomes binding, enabling operational streamlining and financial stabilisation (Malik et al. 2014). Judicial oversight ensures fairness and protects the interests of minorities (Hostak et al. 2013). As such, this research integrates financial, non-financial and macroeconomic variables to identify key delisting drivers through SoAs, aiming to develop early warning indicators and inform decision-making for firms, investors and regulators.

Financial drivers

Financial factors play a central role in understanding delisting decisions (Chaplinsky & Ramchand 2012). Companies with high leverage, reflected in the debt-to-equity (D/E) ratio, experience increased financial risk and are more likely to delist. Similarly, low market-to-book (M/B) ratios and insufficient capital expenditure relative to sales (CAPEX-to-Sales) signal weak investment capacity and poor market valuation, both of which are associated with higher delisting risk (Crocì & Giudice 2014). Additional indicators of financial health include the assets-to-equity (A/E) ratio, which measures shareholder-funded assets (Choi, So & Wang 2021), and the debt-to-assets (D/A) ratio, which reflects the extent of debt financing (Crocì & Giudice 2014). Book value per share (BVPS) and total debt per share (TDPS) provide per-share insights into net asset value and debt burden (Benny & Htuagaol 2013). The long-term debt to total capital ratio (LT_D:Total capital) assesses capital structure risk (Bessler et al. 2012), while the cost of debt and weighted average cost of capital (WACC) represent the effective borrowing rate and expected investor returns (Chaplinsky & Ramchand 2012).

Agency conflicts, particularly those involving free cash flow (FCF), are prevalent in firms with limited growth opportunities (Jensen & Meckling 1976). Excess FCF may lead to inefficient capital allocation and reduced shareholder value (Farrell, Yu & Zhang 2013). Delisting can mitigate these issues by enabling tighter control over cash flows. Relevant variables include FCF, FCF per share (FCFPS), cash flow per share (CFPS), return on assets (ROA), return on fixed assets (RoFA), return on invested capital (ROIC) and the reinvestment rate (RiR) (Wahyuni 2021).

Growth potential is another critical factor. Firms with low growth prospects, often measured by Tobin's Q ratio – the market value of assets relative to their replacement cost – are more prone to delisting (Thomsen & Vinten 2014). High compliance costs, calculated as the sum of external audit and listing fees divided by sales (EAR), may further discourage public listing. Growth-related variables include research and development (R&D)-to-sales ratio, R&D-to-assets ratio, sales growth (S/G) and asset growth (A/G) (Weir, Laing & Wright 2005; Weir, Wright & Scholes 2008; Weir & Wright 2006).

Financial distress, often associated with constrained growth, also increases the risk of delisting (Renneboog, Simons & Wright 2007). Indicators such as the operating cash flow (OCF) margin and the cash flow-to-debt ratio help identify firms under financial strain (Mehran & Peristiani 2010). Smaller firms, particularly those reliant on tangible assets and with limited access to capital, are especially vulnerable.

Information asymmetry – where one party possesses more or better information than another – can lead to adverse selection and inefficient market outcomes (Thompson & Kim 2020). Firms experiencing high asymmetry may opt to

delist to avoid these costs (Bharath & Dittmar 2010). Variables such as the intangibility ratio (I/R) and initial public offering (IPO) underpricing are useful in assessing asymmetry-related risks (Bharath & Dittmar 2010).

Company size, financial visibility, liquidity and profitability also influence delisting decisions. Larger firms are better equipped to absorb compliance costs and maintain investor confidence, while smaller firms with high intangible assets may experience financial constraints (Hostak et al. 2013). Size-related variables include revenue, market value and total assets (Kashefi Pour & Lasfer 2013; Ljungqvist, Nanda & Singh 2006).

Low share turnover and high price volatility reduce financial visibility, increasing delisting risk (Mehran & Peristiani 2010). Misalignment between the cost of equity and actual return on equity can depress share valuations and investor interest (Reiter 2021). The cost of equity reflects the return required by investors based on perceived risk, while the return gap highlights performance discrepancies (Thomsen & Vinten 2014).

Liquidity is another key financial determinant. Firms with low current and quick ratios may struggle to meet their short-term obligations, resulting in reduced investor confidence and increased trading costs (Kang 2017). Such conditions often prompt firms to go private. Additionally, profitability remains a fundamental factor in listing sustainability. Companies with a low net profit margin (NPM), operating margin, pre-tax margin, asset turnover (AT) and sales-to-assets ratios are more likely to delist (Hostak et al. 2013). Conversely, larger, more profitable firms with higher trading volumes tend to remain listed (Crocì & Giudice 2014).

Despite extensive research on the financial determinants of delisting in developed markets, significant gaps remain regarding how these factors operate in emerging economies, such as South Africa. Existing studies have not adequately examined whether traditional financial distress indicators – such as leverage, liquidity and profitability – have the same predictive power in contexts characterised by macroeconomic volatility, regulatory uncertainty and limited capital market depth. Moreover, the interaction between financial metrics and strategic delisting mechanisms, such as SoAs, remains underexplored, particularly whether financially sound firms may delist for non-distress reasons. This study addresses these gaps by examining financial determinants specifically within the South African context and distinguishing between distress-driven and strategic exits.

Non-financial drivers

Corporate governance, regulatory compliance and company reputation have a significant influence on delisting decisions (Thomsen & Vinten 2014). Poor governance undermines transparency and shareholder protection, thereby increasing

the risk of delisting (Konno & Itoh 2018). Governance quality is assessed through chief executive officer (CEO) duality, board composition, size, meeting frequency and director independence (Dwivedi & Jain 2005; Hostak et al. 2013; Ning, Metghalchi & Du 2010).

Chief executive officer duality, where the CEO also chairs the board, is linked to financial distress and higher delisting risk (Hostak et al. 2013). The King IV Report on Corporate Governance discourages this practice unless a lead independent director is present (Lansdell et al. 2025). Chief executive officer tenure stability is also important; frequent changes may destabilise management and reduce profitability (Hwang, Kang & Jin 2014). Key variables include CEO status, tenure and the presence of a lead independent director (Ning et al. 2010).

Board composition affects oversight and agency costs. A higher proportion of independent directors improves governance and reduces delisting risk (Lansdell et al. 2025). Relevant variables include the ratio of executive to non-executive directors, the number of independent directors and whether the chairperson is independent (Salloum, Azoury & Azzi 2013). Board size also matters – larger boards may enhance oversight, while smaller boards offer agility (Darrat et al. 2016). Indicators include the total number of board members, board changes and the percentage change in composition (Malik et al. 2014). Frequent board meetings may also signal increased monitoring of distressed firms, which correlates with a higher delisting risk (Cheng, Aerts & Jorissen 2010). Meeting frequency and attendance rates are key variables (Chou et al. 2013). Adherence to the *Companies Act No. 71 of 2008* and King IV principles reinforces fiduciary duties, influencing listing outcomes (Macey & O'Hara 2002).

Agency theory emphasises the importance of aligning managerial and shareholder interests, particularly in firms with dispersed ownership (Renneboog et al. 2007). Misalignment can lead to shareholder activism and increased delisting risk (Crocì & Giudice 2014). Executive compensation – through share options and performance-based bonuses – can incentivise alignment (Taj 2016). Insider ownership also plays a role; managers with significant stakes may delist to retain control (Kashefi Pour 2015). Key variables include the percentage of non-public shareholders (Djerbi & Anis 2015).

Institutional investors enhance governance through monitoring and visibility, reducing agency conflicts and delisting risk (Vismara, Paleari & Ritter 2012). Lower institutional ownership in distressed firms is associated with a higher likelihood of delisting (Weir & Wright 2006). Directors appointed by pressure-resistant institutional investors may reduce the risk of business failure (Sallehuddin et al. 2019). Key variables include the percentage change in institutional investors and non-public shareholders (Bancel & Mittoo 2009; Hwang et al.

2014). Free float – the proportion of shares held by public investors – is another important factor. Companies with lower free float are more susceptible to delisting because of reduced market acquisition costs and limited liquidity (Cyert, Kang & Kumar 2002). Key variables include the percentage of public and individual investors (Crocì & Giudice 2014).

Executive compensation reflects both incentives and signals of financial distress. In distressed firms, CEOs are often replaced or receive lower compensation (Thomsen & Vinten 2014). Excessive remuneration may indicate agency problems and poor performance (Putri 2021). Key variables include directors' remuneration as a percentage of sales and assets (Cyert et al. 2002) and CEO compensation relative to operating income, sales and net profit (Konno & Itoh 2018).

Board member biographies can also influence the risk of delisting. Factors such as workload, interlinked directorships, age, education and professional qualifications affect board quality and decision-making (Donker, Santen & Zahir 2009). Women directors are associated with better cash flow and lower debt, while men tend to take more risks (Salloum et al. 2013). Higher education, especially a Master's in Business Administration (MBA), may enhance governance quality (Djerbi & Anis 2015). Key variables include qualifications, other positions held and CEO age at delisting (Malik et al. 2014).

Analyst coverage and market activity also influence the risk of delisting. Companies with low analyst coverage tend to have shorter IPO survival rates and lower trading volumes, increasing delisting risk (Intrigano et al. 2020). Market index levels and IPO underpricing serve as proxies for investor sentiment and market conditions (Demers & Joost 2007). Key variables include the number and average of analyst recommendations.

While the importance of governance in corporate performance is well established, the specific role of non-financial factors in driving strategic delistings – particularly through mechanisms like SoAs – remains under-examined in emerging market contexts. Existing research has primarily focused on developed markets where governance standards, regulatory enforcement and institutional investor participation differ substantially from those in South Africa. This study addresses this gap by investigating whether governance quality, board characteristics, ownership structures and executive qualifications influence strategic exits differently in a developing economy context, where governance practices may be less mature and enforcement less consistent. Moreover, the study explores whether these non-financial factors may actually be stronger predictors of SoA delisting than traditional financial distress indicators, challenging conventional assumptions about why companies leave public markets.

Macroeconomic drivers

Macroeconomic conditions – such as inflation, interest rates, gross domestic product (GDP) growth, exchange rates, unemployment and real economic activity – can significantly

influence delisting decisions. High inflation increases operating costs and financial distress, raising delisting risk (Fedderke & Simkins 2012). Elevated interest rates burden leveraged firms by increasing borrowing costs (Del Negro et al. 2019). Positive GDP growth fosters investor confidence, while negative growth signals instability and increases the likelihood of delisting (Djerbi & Anis 2015).

Exchange rate volatility particularly affects firms engaged in international trade, exposing them to financial uncertainty and potential delisting (Choi et al. 2021). High unemployment reduces consumer spending and corporate revenues, increasing financial strain (Kola Benson et al. 2022). Real economic activity – such as electricity generation and distribution – is especially relevant in South Africa, where unstable supply can disrupt productivity and contribute to financial distress (Olajuyin & Mago 2022).

Macroeconomic factors also interact with financial metrics. Efficient cash flow management improves valuation, reduces capital costs and enhances profitability and liquidity (Wahyuni 2021). Growth and visibility attract investment, reinforcing financial health and reducing delisting risk (Putri 2021). Economic prosperity boosts consumer demand, while downturns reduce confidence and spending, impacting performance indicators such as ROA, return on equity (ROE), liquidity and FCF (Macey & O'Hara 2002).

Beyond financial metrics, macroeconomic conditions shape non-financial factors. Economic expansion encourages innovation and market entry, while downturns prompt cost-cutting and operational efficiency (Lansdell et al. 2025). Volatility in raw material prices and exchange rates can disrupt supply chains and affect stability (Kola Benson et al. 2022). These conditions also influence regulatory compliance and corporate reputation (Malik et al. 2014).

In South Africa, load-shedding – planned power outages to prevent grid failure – has become a critical macroeconomic concern, particularly during the period when this study was conducted. These disruptions halt production, raise operational costs and reduce revenues, particularly in manufacturing and mining sectors (Olajuyin & Mago 2022). Supply chain delays and resource diversion from strategic planning to survival further increase governance risks and the likelihood of delisting (Daily & Dalton 2017). Hence, monitoring electricity generation and distribution could offer insight into broader economic health and firm-level vulnerabilities (Kola Benson et al. 2022).

While macroeconomic conditions clearly affect corporate performance and market dynamics, their specific influence on strategic delisting decisions in emerging markets remains poorly understood. Most studies examining the macroeconomic determinants of delisting have focused on developed economies with relatively stable macroeconomic environments, making their findings potentially inapplicable to volatile emerging markets,

such as South Africa. This study addresses this gap by investigating how macroeconomic variables – including inflation, interest rates, unemployment and country-specific factors like electricity supply instability – interact with firm-level characteristics to influence strategic exits through SoAs. Understanding these relationships is crucial for distinguishing between delistings driven by firm-specific challenges and those prompted by broader economic conditions beyond management's control.

The literature reviewed reveals several consistent findings across developed markets. Financial determinants – particularly leverage, liquidity, profitability and market valuation – emerge as central predictors of delisting, with distressed firms exhibiting poor financial ratios and limited access to capital. Non-financial factors, particularly governance quality, board independence, institutional ownership and executive compensation structures, significantly influence the likelihood of delisting, with weak governance correlating with higher exit rates. Macroeconomic conditions, including interest rates, GDP growth, inflation and exchange rate volatility, shape the external environment within which delisting decisions occur, with economic downturns increasing exit pressures. Schemes of arrangement have been identified as a flexible restructuring mechanism used in both distress and strategic contexts, although its prevalence and motivations remain underexplored in emerging markets.

In summary, the existing literature has primarily examined delisting determinants in developed markets, with limited attention to emerging economies where institutional, regulatory and economic contexts differ substantially. Moreover, most studies have not distinguished between different delisting mechanisms, treating all exits as equivalent events. This study addresses these gaps by focusing specifically on SoA as a strategic delisting mechanism in South Africa, examining how financial, non-financial and macroeconomic factors interact to influence these decisions in a developing economy context characterised by volatility, governance challenges and unique regulatory dynamics.

Methods

This study adopts a mixed-methods approach to investigate the factors influencing company delistings from the JSE through SoAs. The research design unfolds in four phases. In the first phase, a systematic literature review was conducted to identify financial, non-financial and macroeconomic variables relevant to delisting decisions. These variables were refined using PCA to reduce dimensionality and improve interpretability. The third phase involved a qualitative content analysis of shareholder circulars to classify delisting mechanisms, including SoA, management buyouts and other strategic approaches. In the final phase, a multivariate panel probit regression model was employed to assess the predictive power of the identified components and macroeconomic indicators. All statistical analyses were performed using Stata Statistical Software: Release 17 (2024).

Model specification

This study employs a multivariate panel probit regression model to estimate the probability of delisting from the JSE through SoA. This method accommodates both time-series and cross-sectional dimensions, offering a robust framework for analysing firm-level and macroeconomic influences on delisting behaviour. The binary dependent variable captures the method of delisting, coded as 1 for firms delisted through SoAs between 2010 and 2023, and 0 for those delisted through other methods during the same period.

The model assumes that unobserved factors influencing delisting decisions are normally distributed and uncorrelated with the observed predictors. This assumption supports the validity of the probit specification and enables the estimation of marginal effects. The resulting model provides a nuanced understanding of the determinants of SoA delistings, capturing the complex interplay between firm-specific characteristics and broader economic conditions (Brooks 2019; Liao 2020) (Equation 1):

$$P(Y_{it} = 1 | X_{it}, \alpha_i) = \phi(\beta_0 + \beta_1 X_{1_{it}} + \beta_2 X_{2_{it}} + \dots + \beta_k X_{k_{it}} + \alpha_i + \epsilon_{it}) \quad [\text{Eqn 1}]$$

Where:

- $P(Y_{it} = 1 | X_{it}, \alpha_i)$ = the probability that the dependent variable (binary outcome) (Y) (delisted) for the subject (i) (delisted because of 'SoA' or 'other methods') equals 1 given the predictor (X_{it}) (continuous independent variables = principal components (PCs) variables from PCA and macroeconomic variables) and the random effect (α_i).
- ϕ = the cumulative distribution function of the standard normal distribution.
- Y_{it} = the dependent binary outcome (Y) indicating delisting for a subject (i) (company delisted because of 'SoA' or 'other methods') at the time (t).
- X_{it} = the vector of independent variables (PC variables from PCA and macroeconomic variables) to measure the probability of delisting (Y) because of 'SoA' or 'other methods' (i).
- β_0 = the intercept term that represents the baseline probability of the outcome (delisted because of 'SoA' or 'other methods') when all predictors (X_{it}) are zero.
- β_1, β_2 and β_k = the coefficients (estimated coefficients) for the independent variables $X_{1_{it}}, X_{2_{it}}$ and $X_{k_{it}}$ (continuous independent variables consisting of PC variables from the PCA and macroeconomic variables) that indicate the z-score (standard normal deviation) change for a one-unit change in the predictors. Positive coefficients increase the probability of the outcome, while negative coefficients decrease the probability of the outcome.
- α_i = entity-specific deviation from the overall relationship, accounting for the unobserved heterogeneity (random effect capturing unobserved heterogeneity).
- ϵ_{it} = represents the idiosyncratic error.

Prior to model estimation, a Pearson correlation matrix was constructed to assess relationships among continuous variables and detect potential multicollinearity. This step was essential to ensure the reliability and interpretability of coefficient estimates (Thomsen & Vinten 2014).

Data sources, observation period and sample

The study relies on secondary data sourced primarily from Bloomberg, accessed through a Bloomberg Terminal, and the audited financial statements of JSE-listed companies. The sample comprises two groups: firms that delisted between 01 January 2010 and 31 December 2023, and firms that remained listed as of 31 December 2023, which serve as the control group. Bloomberg was the primary source for both financial and non-financial variables. Where Bloomberg data were incomplete – particularly for governance indicators – publicly available annual reports and integrated disclosures were used to supplement the dataset.

Although delistings from 2000 onwards were initially considered, the final observation period begins in 2010. This adjustment was necessary because of the limited availability of non-financial data prior to the implementation of mandatory integrated reporting in South Africa (Lansdell et al. 2025). The cut-off date of 31 December 2023 was selected to align with the most recent complete financial year. Between 2010 and 2023, the study recorded 781 delistings, focusing exclusively on ordinary equity delistings, excluding preference shares, bonds and exchange-traded funds. Ordinary shares were selected because of their central role in public equity markets and their impact on investor decision-making (Macey & O'Hara 2002). Within the refined timeframe, 312 ordinary equity delistings were identified. After excluding firms with missing or inaccessible non-financial data, the final delisting sample consisted of 302 companies.

To enable comparative analysis, a control group of 302 companies that remained listed as of the cut-off date was assembled. These firms were matched to delisted companies based on industry classification and firm size, with total assets used as the proxy for size, consistent with standard practice in corporate finance literature (Kashefi Pour & Lasfer 2013). For both groups, firm-level data were collected for each year the company was listed during the observation period. For delisted firms, this included all years up to and including the year of delisting. For control firms, data were captured annually from 2010 to 2023.

The dataset was structured in long format, with each row representing a firm-year observation. This structure enabled the inclusion of time identifiers, allowing for the tracking of changes over time and supporting panel data techniques. Although the primary analysis was cross-sectional, the panel structure allowed for the integration

of temporal dynamics. Financial, non-financial and macroeconomic variables were captured at the end of each financial year to reflect evolving conditions without relying on aggregated measures. This approach preserved the clarity of a cross-sectional design while incorporating time-sensitive insights.

Variable selection was informed by a structured review of the literature, which identified key financial, non-financial and macroeconomic factors potentially associated with delisting behaviour. These variables were operationalised according to established empirical definitions. Macroeconomic indicators – including inflation, interest rates, exchange rates, GDP and unemployment – were sourced from the South African Reserve Bank to contextualise firm-level data within broader economic trends.

Data preparation and principal component analysis

To manage the complexity of the dataset and identify the most salient predictors of delisting, PCA was applied to the financial and non-financial variables derived from the literature. Principal component analysis is a dimensionality reduction technique that transforms a large set of potentially correlated variables into a smaller number of uncorrelated components, each capturing a distinct source of variance. These components are ranked by the proportion of total variance they explain, enabling a more interpretable representation of the data's underlying structure.

Macroeconomic indicators and categorical variables – such as listing board, firm age, pre-listing duration and sector classification – were excluded to focus the PCA on continuous, firm-level time-series data. All variables were standardised prior to analysis to ensure comparability and eliminate the influence of differing units and scales. A covariance matrix was constructed to capture relationships among the standardised variables, forming the basis for identifying principal directions of variation. Rather than applying a strict eigenvalue threshold, components were retained until approximately 60% of the total variance was explained, balancing explanatory power with parsimony (Sallehuddin et al. 2019).

The resulting PCs were used to transform the original dataset into a new set of uncorrelated variables optimised for regression modelling. Factor loadings were examined to interpret each component, with variables loading strongly on the same component grouped as latent constructs. For instance, a component with strong loadings from revenue, profit and margin-related variables was interpreted as representing profitability. The direction of each loading clarified the nature of the relationship between the original variables and the component. This transformation reduced redundancy and multicollinearity while preserving the most informative patterns in the data, providing a refined set of predictors for the multivariate analysis.

Content analysis

To identify the methods by which companies were delisted from the JSE, a qualitative content analysis was performed. Content analysis was chosen for its ability to systematically analyse textual data and identify patterns and themes to inform further analysis (Dumitru & Dragomir 2021). The data collected and analysed consisted of the official announcements (circulars) in which companies announced their decision to delist from the JSE for the sample of companies included in the research. These documents were sourced from the JSE. Some delisted companies' official circulars could not be obtained from the JSE and were therefore collected from Bloomberg. This resulted in 302 circulars (study sample) being analysed to determine each company's method to delist from the JSE. For each circular, the method used to delist was captured in Microsoft Excel and categorised to reflect the relevant theme, ranging from non-compliance with the JSE listing requirements (NC) to winding-up orders (i.e. categories of delistings in South Africa).

A frequency analysis was conducted to determine the prominence of delisting methods among the companies that delisted from the JSE. This analysis involved counting the occurrences of each delisting method, such as SoA, mergers and bankruptcies, as evidenced by the company circulars. The frequency of each method was then converted into percentages to gauge their relative prominence. Visual representations, such as bar charts and pie charts, were created to provide a clear and immediate interpretation of the data. This approach enabled the identification of the most employed delisting methods.

Estimation techniques

All statistical analyses were performed using Stata Statistical Software: Release 17 (2024). The model incorporated 44 independent variables, including financial and non-financial PCs and macroeconomic indicators, as identified through the literature review. Following the comprehensive model, a sequential refinement process was undertaken to eliminate statistically insignificant variables, resulting in a final model that highlights the most robust predictors of delisting through SoAs from the JSE.

Ethical considerations

Ethical clearance to conduct this study was obtained from the School of Accounting Research Ethics Committee (SAREC) at the University of Johannesburg (No. SAREC20 240418/05).

Results, analysis and discussion

This section presents the research findings, beginning with an overview of the PCA results, examining the two primary delisting mechanisms identified through content analysis and analysing the results of the multivariate panel probit

regression used to predict delisting based on financial and non-financial PCs and macroeconomic variables drawn from the relevant literature.

Principal component analysis

Table 1 summarises the financial determinants of the PCA, each comprising variables relevant to delisting decisions. These determinants represent key aspects of financial health, such as leverage, asset efficiency and overall performance. The PCA produced a set of financial and non-financial PCs that capture underlying financial and non-financial constructs. In addition, select variables from the information asymmetry determinant were retained to reflect nuanced decision-making dynamics, particularly those associated with unequal information distribution and adverse selection. Certain determinants were excluded because of data limitations and multicollinearity. The financial and non-financial PCs, selected individual variables and relevant macroeconomic indicators formed the foundation of a panel probit regression model. This model was applied to evaluate the likelihood of delisting through SoAs by comparing listed firms with those delisted through this specific mechanism. The integrated approach provides a comprehensive framework for understanding the complex and interrelated factors that potentially influence delisting decisions on the JSE.

Qualitative content analysis

Delisting represents a significant corporate event, often driven by strategic, regulatory or financial considerations (Thompson & Kim 2020). This analysis examined the procedural and strategic methods used in delisting, including SoA, NC and other mechanisms. Company circulars were analysed to identify the rationale and pathways employed, offering insights into the regulatory and market conditions shaping delisting decisions in South Africa.

The findings reveal that SoA accounted for the majority of delistings (56.1%) between 2010 and 2023, followed by NC (17.6%). Other methods – such as mergers and acquisitions (1.3%), squeeze-outs (2%) and business rescue or listing expiry (0.7%) – were relatively rare. Less common approaches, including winding up, unbundling and private transactions, collectively represented less than 5% of cases. Takeover offers and unspecified reasons accounted for 8.3% and 4.3%, respectively.

Given its prevalence, SoA was used as the proxy for voluntary delisting in the panel probit regression model. An SoA is a court-sanctioned agreement between a company and its shareholders or creditors, typically used to restructure capital or resolve financial distress (Nikani & Holland 2022). Although not inherently a delisting mechanism, its implementation often results in delisting (Malik et al. 2014). Approval requires a majority in number and a 75% majority in value of the affected stakeholders, after which the scheme becomes binding. The flexibility of SoA allows firms to

address complex challenges, streamline operations and enhance financial stability. Judicial oversight ensures fairness and protects minority interests (Hostak et al. 2013), making SoA a strategic and equitable route for corporate restructuring and exit from public markets.

Results from the multivariate panel probit regression model

Building on the content analysis of delisting mechanisms, we present the results of multivariate panel probit regression analyses focused on delistings through the SoA. The initial model includes all 44 independent variables – comprising financial and non-financial PCs, as well as macroeconomic indicators – used to assess their predictive power in explaining delisting behaviour. The dependent variable captures a firm's delisting status, coded as 1 for companies delisted through SoAs between 2010 and 2023, and 0 for those delisted through other methods during the same period. Following the comprehensive model, a sequential refinement process was undertaken to eliminate statistically insignificant variables. The final model highlights the most robust predictors of delisting through SoAs from the JSE.

Initial comprehensive multivariate model

The panel probit regression analysis identified 14 significant determinants that can predict the probability of delisting through SoA versus other methods (see Table 2). Several key statistics were considered to evaluate the model's goodness of fit and overall statistical significance. The Pseudo- R^2 value of 0.61 indicates that the model can explain approximately 61% of the variability in the probability of delisting through SoAs (see Table 3). This moderate level of explanatory power underscores the model's effectiveness in capturing the key determinants that influence delisting decisions because of an SoA. The Wald chi-squared statistic of 42.2, with a corresponding p -value of < 0.001 , demonstrates the overall significance of the model.

The initial multivariate panel probit regression model highlights the multifaceted nature of delisting decisions. Fourteen variables were identified as statistically significant predictors, comprising eight financial, three non-financial and three macroeconomic factors. Among the financial variables, leverage and asset efficiency were positively associated with delisting risk, indicating that higher leverage and lower asset utilisation increase the probability of exit. Cash flow efficiency and financial health emerged as protective factors, with better management reducing the likelihood of delisting. Liquidity was also critical, reinforcing the importance of maintaining short-term solvency. Initial public offering underpricing was linked to long-term delisting risk, while financial size and stability suggested that larger, more resilient firms are less likely to delist. Strong market performance and positive investor expectations further reduced delisting probability. Non-financial determinants included the qualifications of the CEO and chairperson, which were negatively associated with delisting,

TABLE 1: Summary results from the principal component analysis.

Driver	PC name (theme)	Variables measured
Financial		
Access to capital and/or raising equity	• Leverage and asset efficiency • Debt structure and shareholder value • Cost of capital efficiency	• A/E ratio • D/A ratio • BVPS • TDPS • LT_D:Total capital • Cost of debt • WACC
Agency and/or FCF problem	• Cash flow efficiency and financial health • Profitability and asset efficiency	• FCF • FCF per share • CFPS • ROA • RoFA • ROIC • RiR
Company growth	• R&D investment component • Growth dynamics component • Market valuation component	• R&D:Sales • R&D:Assets • Sales growth • Assets growth • Q ratio
Financial distress	• Financial health and liquidity	• OCF margin • Cash flow-to-debt ratio
Information asymmetry and/or adverse selection	• N/A – individual variable used	• Intangibility ratio • Underpricing on day one of the IPO
Company size	• Financial size and stability index	• Revenue • Market value • Assets
Company visibility	• Market performance and expectation index	• Actual return • Difference in return
Liquidity	• Liquidity factor	• Current ratio • Quick ratio
Profitability	• Financial performance component • Asset efficiency component	• NPM • Operating margin • Pre-tax margin • AT ratio • Sales:Total assets ratio
Non-financial		
CEO duality	• Board independence factor • N/A – individual variable	• Lead independent director • CEO years in role
CEO changes	• N/A – individual variable	• CEO changes in period
Governing body composition	• Executive influence on delisting decisions • Governance transparency and independence	• Executive directors % • Independent BOD member % • Chair is an independent, non-executive director • Governance disclosure score
Board size	• Board dynamics and stability	• Total number of directors • Number of BOD changes • % change in BOD members
Frequency of board meetings	• Board meeting engagement	• Number of board meetings • % of members attending board meetings
Diffused ownership	• Ownership diffusion component	• Public shareholder % • Individual investor %
Insider ownership	• Concentrated ownership component	• Non-public shareholder %
Presence of institutional investors	• Institutional influence	• % institutional investors
Major shareholder changes	• Non-public shareholder dynamics • Institutional and major shareholder dynamics	• % change in non-public shareholders • % change in institutional investors
Free float	• N/A – excluded for further analysis – high correlation and missing data	
Management compensation	• Management compensation influence	• Directors' remuneration:Sales • Directors' remuneration:Assets
BOD biographic information	• CEO compensation • Chairperson external commitments • CEO qualification • Chairperson qualification • N/A – individual variable	• CEO remuneration to operating income • CEO remuneration to sales • CEO remuneration to net profit • Number of other positions • Does the chairperson have other positions • The CEO has a postgraduate qualification • The CEO has a professional qualification • Chair has a postgraduate qualification • Chair has a professional qualification • Age of CEO in the year of delisting
Company age, name change, and years of listing	• Company longevity and listing duration	• Listed years • Company age
Analyst recommendations	• N/A – individual variable	• Number of analyst recommendations

BVPS, Book value per share; TDPS, total debt per share; WACC, weighted average cost of capital; FCF, free cash flow; CFPS, cash flow per share; ROA, return on assets; RoFA, return on fixed assets; ROIC, return on invested capital; RiR, reinvestment rate; OCF, operating cash flow; IPO, initial public offering; NPM, net profit margin; AT, asset turnover; CEO, chief executive officer; PC, principal component; BOD, board of directors; A/E, assets-to-equity, D/A, debt-to-assets; N/A, not applicable.

TABLE 2: Initial comprehensive model results.

Variables	Estimated coefficient	Standard error	p-value
Financial			
Access to capital and/or raising equity			
Leverage and asset efficiency	-0.1000	0.0500	0.047*
Debt structure and shareholder value	-0.0670	0.0690	0.330
Cost of capital efficiency	-0.0075	0.0660	0.910
Agency and/or FCF problem			
Cash flow efficiency and financial health	0.1800	0.0790	0.020*
Profitability and asset efficiency	0.2300	0.6700	0.310
Company growth			
R&D investment component	0.2800	0.5100	0.600
Growth dynamics component	-0.0200	0.0820	0.790
Market valuation component	0.0150	0.1200	0.900
Financial distress			
Financial health and liquidity	0.1400	0.0600	0.016*
Information asymmetry and/or adverse selection			
Underpricing on the IPO date	0.0430	0.0130	< 0.001**
Company size			
Financial size and stability index	0.2200	0.0610	< 0.001**
Company visibility			
Market performance and expectation index	0.1600	0.0490	< 0.001**
Liquidity			
Liquidity factor	0.3500	0.1300	0.006*
Profitability			
Financial performance component	0.4500	0.5600	0.810
Asset efficiency component	0.1300	0.0630	0.042*
Non-financial			
CEO duality			
Board independence factor	-0.0300	0.0700	0.066
Number of years the CEO was in the role	0.0330	0.0160	0.048*
CEO changes			
Number of times the CEO changes	0.0220	0.0480	0.640
Governing body composition			
Executive influence on delisting decision	-0.0690	0.0540	0.200
Governance transparency and independence	-0.0370	0.0730	0.620
Size of the board of directors			
Board dynamics and stability	0.0057	0.0450	0.900
Frequency of meetings of the board of directors			
Board meeting engagement	0.0064	0.0710	0.930
Diffused ownership			
Ownership diffusion component	-0.0064	0.0530	0.900
Insider ownership			
Concentrated ownership component	-0.0080	0.0550	0.880
Institutional investors			
Institutional influence	0.0160	0.0510	0.310
Changes in major shareholders			
Non-public shareholder dynamics	0.0350	0.0510	0.490
Institutional and major shareholder dynamics	0.0260	0.0520	0.620
Management compensation			
Management compensation	0.0570	0.0660	0.390
Biographic information of the board of director members			
CEO compensation	-0.0082	0.0275	0.770
Chairperson external commitments	0.0054	0.0570	0.930
CEO qualification	-0.1500	0.0570	0.009*
Chairperson qualification	-0.1300	0.0590	0.025*
Age of the CEO at the time of delisting	0.0055	0.0120	0.650
Name change and year of listing			
Company longevity and listing duration	0.0370	0.0560	0.510
Analyst recommendations			
Number of analyst recommendations	0.0450	0.0980	0.650
Macroeconomic			
Gross domestic product			
GDP	-0.0003	0.0002	0.150
Inflation			
CPI	-0.0330	0.0370	0.370

Table 2 continues on the next page →

TABLE 2 (Continues...): Initial comprehensive model results.

Variables	Estimated coefficient	Standard error	<i>p</i> -value
Exchange rates			
Exchange rates	-0.0190	0.0090	0.029*
Interest rates			
Repo rate	-0.0003	0.0030	0.920
Credit extensions	-0.0034	0.0024	0.160
Unemployment			
Unemployment	-0.0220	0.0160	0.180
Commodities			
Oil price	-0.0030	0.0030	0.220
Capital markets			
Shares traded	0.0006	0.0003	0.042*
Real economic activity			
Electricity	-0.0770	0.0300	0.010*

FCF, free cash flow; IPO, initial public offering; CEO, chief executive officer; GDP, gross domestic product; CPI, consumer price index.

*, **, 5%, 1% level of significance, respectively.

TABLE 3: Initial comprehensive model fit and significance metrics.

Description	Model fit	Overall significance of the model
Pseudo- <i>R</i> ²	0.61	-
Wald chi-squared	-	42.2
<i>p</i> -value for Wald test	-	< 0.001

highlighting the importance of competent leadership. Chief executive officer tenure also contributed to governance stability, reducing exit risk. Macroeconomic variables such as exchange rate volatility, real economic activity and capital market conditions were significant predictors. These findings underscore the influence of external economic pressures on corporate strategy and listing continuity. Overall, the model illustrates that delisting through SoAs is driven by a complex interplay of internal financial health, governance quality and macroeconomic conditions. Firms must proactively manage these dimensions to mitigate delisting risk and sustain their public market presence.

Final model selection outcome

The final model, derived after sequential stepwise elimination of insignificant variables from the initial comprehensive multivariate panel probit regression, refines the predictors that significantly influence the probability of delisting through SoAs. The Pseudo-*R*² value of 0.68 indicates that the final model can explain approximately 68% of the variability in the probability of delisting through SoAs (see Table 4). The Wald chi-squared statistic of 218.82, with a corresponding *p*-value of < 0.001, demonstrates the overall significance of the model. The relatively high chi-squared and low *p*-value indicate that the model is statistically significant, meaning that the combination of the variables provides a robust explanation of the probability of delisting through SoAs.

The final panel probit regression model identified 11 significant determinants predicting the probability of delisting through SoAs versus other methods: debt structure and shareholder value, cost of capital efficiency, the market valuation component, underpricing on the IPO date, the market performance and expectation index, board dynamics and stability, diffused ownership, institutional influence, CEO qualification, repo rate and

unemployment. These variables serve as indicators of potential delisting from the JSE through the SoA.

Access to capital, equity raising and debt structure

The configuration of a firm's debt structure plays a critical role in its likelihood of delisting through an SoA. Indicators such as BVPS, TDPS and the ratio of long-term debt to total capital emerged as statistically significant predictors, with a *p*-value of < 0.001 and a negative coefficient of -0.16 (see Table 5). These results suggest that firms with more favourable debt metrics are less likely to delist, underscoring the importance of maintaining an optimal capital structure to enhance shareholder value and financial resilience. This finding aligns with existing literature, which emphasises that prudent debt management contributes to financial stability and reduces susceptibility to distress events that may trigger delisting (Hostak et al. 2013; Kang 2017). Specifically, lower TDPS and a reduced proportion of long-term debt relative to total capital are associated with improved adaptability to economic volatility and enhanced investor confidence (Mehran & Peristiani 2010). A sound debt structure also facilitates access to equity and capital under favourable terms, supporting strategic growth and long-term viability. These dynamics reinforce theoretical perspectives that highlight the role of capital structure in preserving market presence and mitigating voluntary exit through SoAs (Sallehuddin et al. 2019). The evidence thus supports the adoption of financial strategies that prioritise debt optimisation and shareholder value enhancement as safeguards against delisting risk (Thompson & Kim 2020).

Cost of capital efficiency

Next, the cost of capital efficiency emerged as another significant factor influencing the likelihood of delisting. The analysis revealed a *p*-value of < 0.001 and a coefficient of -0.08, indicating a strong inverse relationship between capital efficiency and delisting probability (see Table 4). Firms that access capital at lower cost are better positioned to maintain operational continuity and avoid financial distress. This result is consistent with foundational financial theories, which argue that efficient capital structures contribute to

TABLE 4: Overall refined final model fit and significance metrics.

Description	Model fit	Overall significance of the model
Pseudo- R^2	0.68	-
Wald chi-squared	-	218.82
p -value for Wald test	-	< 0.001

TABLE 5: Final multivariate panel probit regression results for significant variables.

Variable	Estimated coefficient	Standard error	p -value
Financial			
Access to capital and/or raising equity			
Debt structure and shareholder value	-0.160	0.090	< 0.001**
Cost of capital efficiency	-0.080	0.060	< 0.001**
Company growth			
Market valuation component	-0.060	0.040	0.015*
Information asymmetry and/or adverse selection			
Underpricing on the IPO date	0.043	0.017	0.012*
Company visibility			
Market performance and expectation index	0.170	0.056	0.002*
Non-financial			
Board size			
Board dynamics and stability	0.050	0.030	0.018*
Diffused ownership			
Ownership diffusion component	-0.110	0.070	< 0.001**
Institutional investors			
Institutional influence	-0.130	0.100	< 0.001**
Biographic information of BOD members			
CEO qualification	-0.150	0.057	0.009*
Macroeconomic determinants			
Interest rates			
Repo rate	0.025	0.003	< 0.001**
Unemployment			
Unemployment	0.017	0.005	0.016*

IPO, initial public offering; CEO, chief executive officer; BOD, board of directors.

*, **, 5%, 1% level of significance, respectively.

long-term stability and reduce the need for restructuring mechanisms such as SoAs (Jensen & Meckling 1976; Modigliani & Miller 1958). Efficient equity raising enhances shareholder value and reinforces a firm's market standing, further reducing delisting risk. The findings also highlight the strategic importance of financial agility and prudent fiscal management. Firms that maintain access to capital and manage financial obligations effectively are more resilient in the presence of economic uncertainty. Consequently, companies should adopt comprehensive financial strategies that prioritise cost-effective capital acquisition and robust governance to safeguard against delisting pressures and promote sustainable growth.

Market valuation and company growth

Market valuation emerged as a statistically significant factor influencing the likelihood of delisting through an SoA. With a p -value of 0.015 and a coefficient of -0.06, the analysis indicates that higher market valuation is associated with a reduced probability of delisting (see Table 5). This inverse relationship highlights the importance of investor perception and sustained growth in maintaining a firm's public market presence. A strong market valuation typically reflects favourable performance indicators and growth potential,

which bolster investor confidence and reduce the need for strategic exits (Makrominas & Yiannoulis 2021). Firms perceived as financially robust and well-positioned are less likely to encounter structural pressures that precipitate delisting. This supports the view that market valuation serves as a proxy for corporate health and future prospects (Ljungqvist et al. 2006).

Furthermore, companies with elevated valuations are better equipped to attract investment, pursue expansion and maintain financial resilience. These advantages reduce the necessity for capital restructuring through SoAs, which is often employed in response to financial instability or strategic misalignment (Nikani & Holland 2022). A favourable valuation also signals stability and growth to stakeholders, mitigating delisting risk (Donker et al. 2009). The findings, therefore, reinforce the strategic importance of valuation management. Firms that cultivate and sustain high market valuations are more likely to retain their listing status, underscoring the need for consistent financial performance and effective market positioning.

Information asymmetry and initial public offering underpricing

Initial public offering underpricing was also identified as a significant financial variable associated with delisting through an SoA. The analysis yielded a p -value of 0.012 and a coefficient of 0.043, indicating a positive relationship between first-day underpricing and the probability of delisting (see Table 5). While underpricing may attract initial investor interest and stimulate early market momentum (Intrigano et al. 2020), it can also introduce long-term vulnerabilities (Demers & Joost 2007). The positive coefficient suggests that underpricing, often driven by information asymmetry between insiders and public investors, may distort market expectations and lead to mispricing. This can undermine investor confidence and contribute to financial instability (Kashefi Pour 2015). Although underpricing may generate short-term enthusiasm, it may result in lower sustained valuations and increased susceptibility to delisting pressures. These findings underscore the intricate relationship between IPO strategy and long-term corporate performance. Firms that rely heavily on underpricing may find it challenging to maintain valuation levels and meet investor expectations, prompting restructuring through SoAs. Transparent and balanced IPO pricing strategies are therefore essential. Minimising information asymmetry and aligning initial pricing with intrinsic value are critical for fostering investor trust and ensuring long-term viability (Kashefi Pour 2015).

Company visibility and market performance

Market performance and investor expectations, measured through a composite index comprising cost of equity, actual returns and return differentials, were found to be significant financial determinants of delisting through SoAs. The analysis yielded a p -value of 0.002 and a coefficient of 0.17 (see Table 5), indicating that stronger market performance and elevated return expectations are associated with a

reduced probability of delisting. The positive coefficient suggests that improvements in this index enhance corporate visibility and investor confidence, thereby mitigating delisting risk. This relationship highlights the importance of sustained market engagement and performance signalling. Firms that consistently deliver positive returns and meet or exceed investor expectations are more likely to be perceived as financially sound and strategically viable (Khan & Ali 2019; Nikani & Holland 2022). These perceptions foster investor trust and reduce the likelihood of strategic restructuring through SoAs. The findings are consistent with signalling theory, which posits that observable financial performance serves as a credible indicator of a firm's underlying value and future prospects (Grullon, Larkin & Michaely 2018). Enhanced visibility through strong market performance attracts investor interest and reinforces a firm's position in the public market. Companies that manage investor expectations effectively and maintain consistent returns are better positioned to avoid delisting pressures, underscoring the strategic importance of transparency and financial robustness.

Board dynamics and stability

Board dynamics and stability emerged as significant non-financial factors influencing delisting through SoAs. Variables such as board size, frequency of board changes and percentage turnover produced a p -value of 0.018 and a coefficient of 0.05 (see Table 5). The positive coefficient indicates that increased board turnover and larger board sizes are associated with a higher probability of delisting, emphasising the role of governance continuity in corporate sustainability. Frequent changes in board composition may signal internal instability and strategic misalignment, which can disrupt long-term planning and erode investor confidence (Sallehuddin et al. 2019). Such instability often reflects deeper governance challenges that may necessitate structural interventions, including SoAs. The market may interpret these disruptions as indicators of leadership uncertainty, thereby increasing perceived risk and delisting likelihood (Martinez & Serve 2017). While larger boards may offer diverse perspectives, they can also introduce inefficiencies and hinder responsiveness to market conditions (Bessler et al. 2012). The complexity of managing larger or frequently changing boards may exacerbate governance issues, prompting the need for restructuring to realign strategic direction (Daily & Dalton 2017). These findings underscore the importance of maintaining a stable and cohesive board structure. Effective governance, characterised by continuity and strategic alignment, is essential for sustaining investor trust and mitigating the risk of delisting. Firms that prioritise board stability are better equipped to navigate uncertainty and maintain their listing status.

Ownership diffusion

Ownership diffusion emerged as a significant non-financial variable influencing delisting through SoAs. With a p -value of < 0.001 and a coefficient of -0.11 (see Table 5), the

analysis reveals a strong inverse relationship: as ownership becomes more widely distributed among shareholders, the probability of delisting decreases. This finding highlights the governance benefits of dispersed ownership structures. A diffused ownership base limits the influence of dominant shareholders, promoting balanced decision-making and reducing the risk of strategic misalignment (Khan & Ali 2019). Broader shareholder participation enhances oversight and accountability, safeguarding against managerial opportunism and financial mismanagement (Crocì & Giudice 2014). These dynamics contribute to corporate stability and reduce the need for restructuring through SoAs.

Institutional influence

Institutional investor presence was also found to be a significant predictor of the likelihood of delisting. With a p -value of < 0.001 and a coefficient of -0.13 , the analysis indicates that increased institutional ownership is associated with a lower probability of delisting (see Table 5). Institutional investors, because of their substantial equity stakes and professional expertise, play a critical role in monitoring management and influencing strategic decisions (Mehran & Peristiani 2010). Their involvement typically leads to stronger governance practices, disciplined planning and improved financial performance (Thomsen & Vinten 2014). Institutional participation also signals credibility, attracts additional investment and fosters transparency and regulatory compliance (Djerbi & Anis 2015). These factors collectively reduce the risk of delisting and support long-term market viability (Chaplinsky & Ramchand 2012).

Chief executive officer qualifications and board biographic information

Chief executive officer qualifications and board biographic data offer an innovative lens for understanding delisting risk. The analysis identified CEO qualification as a significant non-financial determinant, with a p -value of 0.009 and a coefficient of -0.15 (see Table 5). This suggests that higher levels of education and professional credentials are associated with a reduced likelihood of delisting through SoAs. Qualified CEOs bring strategic insight, industry expertise and leadership capacity that enhance governance and operational decision-making (Kashefi Pour 2015). Their ability to manage risk, respond to market dynamics and implement long-term strategies contributes to organisational resilience and investor confidence (Sallehuddin et al. 2019). The presence of well-qualified leadership signals credibility and strategic foresight, reducing the need for corrective restructuring (Hostak et al. 2013). These findings underscore the importance of executive competence in sustaining listing status. By investing in capable leadership and maintaining strong governance frameworks, firms can enhance strategic execution and reduce the exposure to delisting pressures.

Interest rates

Among the macroeconomic variables examined, the repo rate – used as a proxy for prevailing interest rates – was identified as a significant predictor of delisting through SoAs. With a p -value of <0.001 and a coefficient of 0.025 (see Table 5), the analysis reveals a positive relationship: as interest rates rise, the probability of delisting increases. This finding underscores the influence of broader economic conditions on corporate stability and strategic decision-making. Higher interest rates elevate borrowing costs, placing pressure on firms' financial resources and constraining investment capacity. These conditions can erode financial flexibility and increase the likelihood of distress, prompting companies to consider restructuring options such as SoAs (Bharath & Dittmar 2010). This dynamic complements earlier findings on capital efficiency, where elevated financing costs undermine operational sustainability. Theoretical foundations also support this relationship. Modigliani and Miller (1958) and Jensen and Meckling (1976) emphasise the importance of efficient capital access for corporate viability. Firms with weaker capital structures or limited funding alternatives are more vulnerable in high-interest environments, increasing their exposure to delisting risk. The findings, therefore, underscore the importance of proactive financial management in maintaining resilience amid shifting macroeconomic conditions.

Unemployment rate

The unemployment rate also emerged as a significant macroeconomic variable influencing the likelihood of delisting. With a p -value of 0.016 and a coefficient of 0.017 (see Table 5), the analysis suggests that higher unemployment is associated with a higher likelihood of delisting. This reflects the broader impact of labour market instability on corporate performance and investor sentiment. Elevated unemployment signals economic distress, suppressing consumer demand and weakening market conditions (Kola Benson et al. 2022). These pressures can reduce corporate revenues and profitability, increasing the risk of financial instability and strategic restructuring (Liao 2020). The relationship complements findings on market valuation and financial resilience, where adverse macroeconomic conditions undermine investor confidence. Companies operating in high-unemployment environments must adopt adaptive strategies to preserve financial health and mitigate delisting risk. These findings reinforce the importance of macroeconomic awareness in strategic planning and corporate sustainability.

Conclusion

This study provides an empirical analysis of corporate delisting from the JSE, with a particular focus on SoAs as a prominent exit mechanism. By integrating financial, non-financial and macroeconomic variables into a multivariate panel probit regression model, the research demonstrates that delisting is not merely a symptom of financial distress but often reflects a strategic response to governance

inefficiencies, market dynamics and broader economic pressures. The final model, which exhibits strong explanatory power, identifies 11 significant predictors, including debt structure, cost of capital efficiency, market valuation, board dynamics, ownership diffusion, institutional investor presence, CEO qualifications and macroeconomic indicators such as interest rates and unemployment.

These findings have practical implications for multiple stakeholders. Corporate executives should prioritise financial agility and governance stability, ensuring optimised capital structures and strategically aligned leadership. Boards must maintain continuity and transparency, as frequent changes and weak oversight are associated with an elevated delisting risk. Institutional investors, shown to exert a stabilising influence, are encouraged to deepen engagement with portfolio companies to promote accountability and resilience. The continued evolution of South African corporate governance frameworks – from King IV, which informed this study's data collection period, to the forthcoming King V expected in 2025 – underscores the dynamic nature of governance expectations. As King V is anticipated to emphasise sustainability, stakeholder inclusivity and enhanced ethical leadership, firms that proactively align with these emerging principles may strengthen their governance foundations and reduce strategic exit pressures driven by governance deficiencies.

The findings of this study yield several critical policy implications for regulators, policymakers and market authorities. Regulators should implement targeted monitoring programmes to identify firms with governance weaknesses – particularly frequent board changes, concentrated ownership and weak CEO qualifications – as early warning signals for potential strategic exits. Support mechanisms, such as governance training programmes and best practice guidance, could help firms maintain listing status. Policymakers should consider developing differentiated compliance frameworks that find a balance between enforcement and support, particularly for smaller firms operating in volatile environments. A tiered regulatory approach based on firm size and resources could reduce compliance burdens that may be driving strategic delistings while maintaining market integrity.

The strong influence of interest rates and unemployment on delisting probability underscores the need for coordinated macroeconomic policies that promote stability. Addressing systemic challenges – such as energy instability through load-shedding mitigation, labour market reform and monetary policy predictability – could reduce external pressures driving firms to exit public markets. Given the stabilising effect of institutional ownership, policymakers should create incentives for greater institutional investor participation in South African equities, particularly through pension fund investment requirements, tax incentives or reduced transaction costs. Enhanced institutional engagement could improve governance and reduce the risk of delisting across the market.

The prevalence of SoA delistings suggests that viable companies are choosing to exit public markets for strategic reasons. Regulators should investigate whether market microstructure issues – such as low liquidity, high transaction costs or limited analyst coverage – are contributing to these exits and implement reforms to enhance market attractiveness, such as market maker programmes or reduced listing fees for qualifying firms.

While the study offers valuable insights into delisting dynamics within South Africa, several limitations should be acknowledged. The analysis focused exclusively on ordinary equity delistings, excluding other instruments that may follow different exit pathways. Data limitations, particularly gaps in non-financial disclosures, necessitated the selective exclusion of certain data points, which may introduce bias. The use of PCA, while effective for dimensionality reduction, may obscure nuanced relationships between individual variables and delisting outcomes. Additionally, the cross-sectional nature of the final regression model limits causal inference and the ability to capture long-term strategic shifts. The findings are also specific to the South African regulatory and economic context, which may constrain their generalisability.

To mitigate these limitations, several measures were implemented. Firstly, the matched control group design – pairing delisted firms with similar listed firms by industry and size – helped control for observable heterogeneity and reduce selection bias. Secondly, the use of PCA was balanced with the retention of individual variables for constructs such as information asymmetry, thereby preserving interpretability where dimensionality reduction might obscure important relationships. Thirdly, the panel data structure, although analysed cross-sectionally in the final model, enabled temporal tracking of variables and allowed for the integration of time-varying macroeconomic conditions, partially addressing dynamic concerns. Fourthly, rigorous data validation procedures were employed, cross-referencing Bloomberg data with audited financial statements and public disclosures to enhance accuracy. Fifthly, sensitivity analyses using different variance threshold levels in PCA confirmed the robustness of the selected PCs. While these measures do not eliminate all limitations, they represent good-faith efforts to enhance the reliability and validity of the findings within the constraints of available data and the South African context.

Future research could address remaining limitations by incorporating a broader range of financial instruments, applying longitudinal designs and conducting comparative analyses across emerging and developed markets. Sector-specific investigations may reveal how industry characteristics – such as regulatory intensity, technological disruption or commodity dependence – influence exit decisions. Post-delisting studies examining firm performance and stakeholder outcomes could also offer deeper insights into the long-term implications of corporate exit strategies.

By identifying early warning indicators and offering strategic recommendations, this study contributes to a more nuanced understanding of delisting. It supports the development of interventions aimed at preserving the integrity, inclusivity and sustainability of public capital markets in South Africa and beyond.

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This article is based on data from a larger study. A related article focusing on Unmasking Delistings: A Multifactorial Analysis of Financial, Non-Financial and Macroeconomic Variables has been published in *Journal of Risk and Financial Management*, 18(4), 194. The present article addresses a distinct research question, focusing on schemes of arrangement and corporate exit: A South African perspective.

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

CRedit authorship contribution

Peter A. Lansdell: Conceptualisation, Formal analysis, Investigation, Methodology, Project administration, Writing – original draft, Writing – review & editing. Ilse Botha: Conceptualisation, Methodology, Supervision, Visualisation, Writing – review & editing. Ben Marx: Supervision. All authors reviewed the article, contributed to the discussion of results, approved the final version for submission and publication and take responsibility for the integrity of its findings.

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Data availability

Data will be made available on request. However, this must comply with the University of Johannesburg's ethics requirements.

Disclaimer

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